



Review

Challenges of masked communication in healthcare and facilitating strategies

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Abstract

Wearing a face mask is one of the main means of preventing the transmission of certain respiratory diseases. This measure, combined with social distancing and hand washing, helps to slow the spread and reduce transmission of the virus, especially among people who are expressed as asymptomatic carriers, while causing communication difficulties between patients and healthcare professionals. If strategies to cope with these difficulties are not developed, serious errors may occur in the field of health services. Because the field of health services is one of the service areas where it is vital to maintain communication without interruption. For this reason, the effective performance of the procedures requires that the health personnel understand the messages correctly and appropriately both in their communication with each other and with the patient and that the patients can adequately express their feelings and thoughts to the healthcare professionals. The aim of this study is to reveal the difficulties and facilitating strategies of masked communication in health services during the COVID-19 process. The method of "document scanning-a literature review" was used as a way of data collection in the research. In this direction, the literature dealing with the importance of the face in expressing emotions in face-to-face communication and the difficulties caused by face masks in communication during the COVID-19 epidemic was scanned using keywords and various combinations of these words.

Keywords: Communication barriers; COVID-19; health services; masks; non-verbal communication.

Successful communication is a fundamental component of healthcare, and ensuring that the healthcare professional understands messages accurately and appropriately, as well as patients being able to adequately express their concerns to health-care professionals, is essential to performing procedures effectively.^[1] In this context, health-care providers use verbal communication to convey basic information about medical care, planning of activities, instructions, and procedures to patients with words of support and encouragement in uncertain or difficult times. In this context, health-care providers use verbal communication to convey basic information about planning medical care activities, instructions, and procedures to patients with words of support and en-

couragement during uncertain or difficult times. On the other hand, effective communication in healthcare is also a central requirement for establishing therapeutic relationships, and functional professional relationships are a prerequisite for the provision of high-quality care.^[2] However, face masks used in healthcare may reduce the quality of communication by attenuating the verbal communication signals produced by the verbal communicator, while also hindering communication non-verbally, for example, by eliminating the majority of facial expressions.^[3] Preventing facial expression may lead to insufficient understanding of the information or support words provided in the field of healthcare, leading to disappointment and anxiety, which may lead to a decrease in the patient's

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Submitted Date: July 13, 2021 **Revised Date:** November 24, 2023 **Accepted Date:** December 21, 2023 **Available Online Date:** July 03, 2024

Journal of Psychiatric Nursing - Available online at www.phdergi.org



quality of life.^[4] In summary, wearing a mask creates a physical barrier to effective communication at a basic level.^[5] However, healthcare is an area where the use of medical masks is necessary and inevitable for the safety of both staff and patients, and it is not possible to give up the use of masks. Therefore, it is essential to pay attention to the effect of the mask on communication and well-being, thus ensuring that patients and healthcare professionals can communicate healthily, and considering ways to maintain patient participation and satisfaction. The aim of this study is to reveal what the difficulties of masked communication in healthcare are and the strategies and measures that facilitate these difficulties.

The Role of the Face in Expressing Emotions

In health-care settings, the ability to appropriately perceive and interpret facial expressions and emotions is crucial in shaping effective health-care communication and functional health-care provider-patient relationships.^[6] Because facial expressions are subtle social signals and effectively communicate behavioral intentions, attitudes, as well as emotional states.^[7] Face as an anatomical figure; it can be divided into upper, middle, and lower parts, and each plays an important role in expressing the individual's emotions and moods.^[8] The eyes, located in the upper part of the face, and the mouth, located in the lower part of the face, are the two main organs that help read the faces of others. It is stated that the middle and lower face, which is covered by the mask, is very effective in emotional recognition. In this context, types of covering certain parts of the face can interfere with different emotions. For example, while the mouth seems important for detecting happiness and fear, the eyes are more related to anger, fear, and sadness.^[9] Eyebrows, on the other hand, have received little attention in communication research. However, eyebrows can be just as effective as the eyes for facial recognition. While the absence of eyebrows on familiar faces causes a significant deterioration in recognition performance, it is reported that the absence of eyebrows causes more difficulty in face recognition than the absence of eyes.^[10]

According to the facial action coding system, which classifies facial expressions created by different emotions by clearly distinguishing between facial movements and inferences about what these movements mean; expressions of happiness occur when the cheeks lift up, causing the corners of the lips and crow's feet to appear.^[11] The disgust expression consists of nose wrinkling, lip corner depressing, and lower lip depressing. In both expressions, the majority of their signals are located in the lower face, and these facial expressions are produced by a number of facial muscles. The midface contains the "nasal crease," a unit of movement that wrinkles and pulls the skin upward along the sides of the nose and is used to convey disgust. While the lower face

What is presently known on this subject?

- Although face masks are one of the main tools of preventive measures in the COVID-19 epidemic, they negatively affect communication in the field of healthcare and reduce service quality by eliminating the role of the middle and lower face, which is important in emotional expression. Information on the subject has gained importance during the epidemic process we are in and what can be done for the communication problems experienced has begun to be discussed.

What does this article add to the existing knowledge?

- This study added other elements to the literature, such as body language, touch, use of voice, and technology, in addition to the use of face in emotional expression, and offered health professionals a guide to evidence-based practices.

What are the implications for practice?

- In this article, strategy options are provided to practitioners by providing information on in which situations and why each of the practical and evidence-based strategies that will make masked communication effective will be more advantageous.

contains more than one movement unit, each of the jaw and lip movements conveys a specific set of emotions.^[11,12]

Face recognition is an important social and psychological input for children and adults. However, masks greatly reduce this input by making the mouth invisible.^[13] However, even when the mouth does not carry out any verbal communication, it alone can transmit a message. It conveys emotional content and meaning. Very young children perceive messages such as happiness, sadness, danger, or doubt reflected from the mouth of a verbal communicator.

Studies provide basic data that closures in the mouth area greatly negatively affect the recognition of emotions on the face.^[14,15] For example, there is a consensus that a closure covering the lower parts of the face, especially the mouth,^[16] creates an obstacle in evaluating a happy emotional state.^[15,17] In addition, despite the soft or muffled verbal communication caused by the mask, we need to see the other person's mouth to understand them, because we read lips. On the other hand, a closed mouth causes stress on both parties in verbal communication, makes communication inefficient as it makes breathing difficult, and reduces or slows down understanding. As a result, emotional perception decreases due to face masks and the role of the upper face in emotional expression becomes important.^[18]

It investigated whether emotion recognition was impaired on faces wearing masks compared to open faces in two samples of 790 participants between the ages of 18 and 89, and evaluated emotion recognition performance for faces covered with bubbles and showing only their upper part. It was found that emotion recognition was impaired for faces wearing masks when compared to unmasked faces for all emotions tested (anger, fear, happiness, sadness, disgust, and neutral).^[19]

Healthcare professionals report that since the start of the COVID-19 pandemic, there have been frequent misunderstandings about patients' wishes and concerns due to the devastating effects of masks.^[20] In particular, since positive facial expres-

sions in healthcare professional-patient communication play an important role in reducing patient anxiety, wearing face masks negatively affects this relationship. Covering the face will also affect the healthcare professional's response to the situation by reducing the patient's ability to determine their emotions.^[18]

The Effect of Face Masks on Face-to-Face Communication and the Challenges Encountered

The field of healthcare requires face-to-face communication due to the nature of the service. Face-to-face communication with patients and their relatives; it facilitates understanding and being understood by allowing facial expressions and therefore emotions to be reflected, and provides the opportunity to provide instant feedback. Face-to-face communication is one of the basic elements of healthy communication. On the other hand, masks used compulsorily in healthcare services dominate the entire communication process. It functions to dominate the source and accordingly differentiate the message or obscure the meaning by activating emotions rather than being understood by creating emotional associations in the target audience.^[21] Because in communication, it is important not only to hear what is said but also to see how the speaker says it with facial expressions.^[22]

As a result of a qualitative research conducted to determine the communication style, problems, and expectations between nurses and patients, establishing mutual empathy for better communication, taking patient complaints into account, ensuring coordination by creating an environment of trust, nurses doing their jobs with pleasure, gaining therapeutic communication skills, and especially medical important findings such as clear explanation of terms were obtained.^[23] In this context, in health services, patients, their relatives, and health professionals need to understand each other well. Face-to-face communication is the beginning of mutual understanding. Because, in the process of face-to-face communication, the way a person listens, looks, moves, and reacts; it shows whether he cares about the other person, whether what he says is true or not, and whether he listens well. These non-verbal signals, when matched with spoken words, increase interpersonal trust, openness, and harmony, but otherwise create tension, mistrust, and confusion.^[24]

Research shows the negative effects of wearing a face mask in clinical contexts where there is limited access to facial expressions. Because it has been stated that in healthcare services when patients cannot clearly hear the information provided by healthcare professionals, they tend to "guess" about what is communicated.^[25] However, in theory, it is necessary to ensure that a patient has access to all relevant information to make decisions in the context of healthcare. Otherwise, transparency

and openness would be compromised and the patient's fundamental human right to health and autonomy would be neglected. In addition, the information collected by healthcare professionals about the patient may be incomplete, and this may lead to clinical inaccuracies and directly jeopardize patient safety.^[25] Another study investigating the impact and difficulties of wearing a mask in healthcare on face-to-face communication was based on the relevant literature. While revealing communication challenges related to mask-wearing across a variety of healthcare settings and patient populations through a scoping review, it has demonstrated that the ability to communicate effectively is compromised.^[26]

In a systematic review study examining the effect of face masks on face-to-face communication in the field of healthcare, 15 studies that met the inclusion criteria out of 433 studies were examined. Of these studies, 93% reported a detrimental effect of face masks on speech understanding, and all reported decreased hearing with face mask use. Background noise has been found to have a more detrimental effect on the speech comprehension problem that already exists in hearing-impaired populations.^[27]

A study examining the effects of mask use on communication skills in the general population during the COVID-19 epidemic and the changes in these effects according to the presence of hearing loss was conducted with 422 adult individuals. The results reveal that masks have a negative impact on communication in the general population, while mask use has a negative impact on some communication skills. It has been shown that the changes in these elements create differences between individuals with hearing loss and individuals with normal hearing.^[28]

Face masks may cause additional hardship for special populations. For example, the elderly and hearing-impaired individuals rely heavily on facial expressions to communicate.^[29] It is stated that 68% of people aged 70 and over may have some degree of hearing loss, and this may worsen communication problems.^[30] In a study conducted using a survey with 243 participants regarding the difficulties that may arise during face-to-face communication due to the use of masks in healthcare institutions, it was revealed that the use of masks significantly increased the listening effort of the participants and that hearing loss had an additional effect on the listening effort. In addition, it has been shown that the mask causes problems in understanding speech, reduces interest in speaking, and causes more difficulties in communicating with patients.^[31] In addition to this, situations such as the hospital experience of the inpatient, the duration of hospital stay, their needs, or rehospitalization are also directly affected by hearing loss.^[32] Mouth vision is important for hearing-impaired individuals, especially when using sign language, and non-transparent face masks prevent mouth vision and prevent understanding.^[33]

Strategies to Facilitate Masked Communication

Expression of emotions is of great importance in healthcare, and the mask greatly restricts emotional expressions, but people have a variety of tools beyond facial expressions to interpret another's emotional state.^[34] In this context, attention can be drawn to these tools in facilitating strategies. For example, emotions can be expressed using more hand and arm movements during the communication process. Body posture and body language can be taken into consideration to understand the emotional state of the people we communicate with.^[14,34] In addition, it can be helpful to use the upper face through the eyebrows, eyes, and upper cheeks when communicating. For example, closing the eyes when agreeing with the other party and raising the eyebrows when disagreeing can be adopted in interpersonal environments.^[35] It is also possible to obtain some information from head movements in communication.^[36] First of all, knowing what these actions are and developing knowledge and skills about these options can minimize the negativities and difficulties experienced and greatly facilitate communication. However, some people may have a very limited gestural repertoire and limited expressive abilities toward the body. These individuals may be provided with sufficient information to keep alternative and additional communication channels open.^[37] In this regard, it is very important for health-care professionals to take into account other factors other than facial expression and to be aware of the power of non-verbal communication when communicating with the patient.

Another facilitating strategy is to make some changes in voice usage. For example, speaking loudly and clearly can make it easier to understand. In clinical environments where confidentiality is important and in situations where loud communication may be a problem, communicating by writing or supporting conversations with sign language can be a practical solution. Another notable strategy is to ensure that health-care professionals have facial photographs on their collars that will enable them to physically identify themselves to others. This practice can allow the other person to "fixate" on the face displayed in the photo during the first contact or subsequent communication and get a better impression of the interlocutor's main facial features. A study was conducted in the field of healthcare with the assumption that wearing a face mask negatively affects communication. In this study, health-care professionals wanted to investigate whether this practice had an impact on patients' perception of health-care professionals by wearing portrait photos of smiling faces on their gowns in addition to their face masks. During the 16-day study period, healthcare professionals wore surgical face masks in all interactions with patients, and on 8 of the 16 days; they attached portrait photographs to their work clothes in a

random order. After completion of patient visits, 226 patients were administered a survey in which they rated three items regarding the friendliness of the staff, the medical quality of the treatment, and how well they felt during treatment. The average scores of the surveys of healthcare professionals on days with photos were found to be significantly higher than on days without photos. The study showed that the use of portrait photographs with smiling faces had a positive impact on patients' perceptions of health-care professionals.^[38]

One facilitating strategy regarding the nature of face masks to be used is the use of transparent masks. Studies have stated that face masks should be transparent and that transparent masks reduce communication stress and frustration.^[13,14] It is stated that masks suitable for lip reading, the use of technology channels, and patient information cards can be effective in facilitating communication, especially in individuals with hearing loss.^[39] However, the benefits of masks with different structural and textural properties may be different for individuals with different hearing characteristics and those who differ in evaluating visual cues. In addition, the consensus on transparent mask recommendations is not clear. For example, while it has been suggested that transparent masks are beneficial for people with normal hearing loss because they allow visual facial interrogation and lip reading, some studies.^[40] He stated that the transparent face mask and face shield are primarily responsible for sound attenuation.^[41,42] Although face masks hinder communication to some extent, a study revealing differences in performance found that cloth face masks had the highest negative impact on speech intelligibility, while surgical and N95 masks posed relatively less of an obstacle to communication.^[25] In line with this information, it can be said that it would be beneficial to give patients the opportunity to choose a mask.

Another recommended strategy in today's conditions, where communication technologies have begun to play a central role in facilitating live interpersonal connections and interactions, is the use of telecommunication tools in addition to face-to-face communication in situations requiring masks and in clinical settings. In communication with patients, some meetings, Skype, Zoom, etc., can be performed without using a mask.^[43]

It has been stated that the effectiveness of masked communication can be achieved by taking into account the age, understanding level, and communication skills of the parties.^[3] In this context, face masks may make communication with children more challenging. In addition to verbal strategies, making body language and gestures more specific, using pictures and written forms, and getting support from parents may be helpful in easing this additional challenge.^[44]

Another facilitative strategy is to simplify the message as much as possible to reduce the cognitive effort involved in achieving the required understanding. Repeating the mes-

sage several times without changing the sentence structure can be considered a useful strategy, especially in the elderly.^[45] In addition, visual aids such as good eye contact, appropriate lighting, and the use of a whiteboard can also aid communication in some environments.

Conclusion and Recommendations

The use of masks causes communication difficulties by hiding emotional expressions, preventing the understanding of verbal expressions, and causing difficulty in speaking in a communication environment such as healthcare, where facial visibility and emotional expressions are important. Despite all these difficulties, the use of masks is indispensable for healthcare services. For this reason, health professionals may be advised to take into account other elements that may convey the emotional expressions that the mask prevents to the other party. For this purpose, hand and arm movements, orientation of the head, and expression of the eyebrows and eyes can be made more evident. In addition, taking into account the suitability of the environment, strategies such as high use of voice tone, physical touch, showing the face in short periods of time when a mask is not required, or introducing the face to the other party through the use of technology can be adopted, as well as communicating by correspondence in intensive care environments where silence is important and to prevent misunderstandings.

Considering that communication is two-way, it is thought that it would be beneficial for educators to provide objective information to patients and their relatives that will increase awareness of communication-facilitating strategies. In addition, ensuring that healthcare professionals and patients are directed to strategies that facilitate masked communication will also contribute to the effectiveness of communication. In-service training programs can be organized on this subject.

Integrating the issue of masked communication into corporate communication strategies by senior managers may also contribute to the adoption of the subject. At the unit management level, it is thought that it would be beneficial for managers to take the initiatives to ensure continuity by turning strategies into a form of behavior for health professionals in line with the dynamics of the unit. In addition, creating technological environments that do not require the use of masks in communication with the patient, even in limited time periods, can also be taken into consideration as a suggestion.

As a result of this study, it is thought that longitudinal and experimental studies that researchers will conduct on masked communication will guide both the literature and practitioners. In addition, new strategies can be put forward by conducting qualitative research that will reveal the comments and analyses of health professionals, patients, and their relatives, and these strategies are; can be differentiated according to gender, age, socioemotional status, and special populations.

Conflict of Interest: There are no relevant conflicts of interest to disclose.

Use of AI for Writing Assistance: No AI technologies utilized.

Financial Disclosure: The authors declared that this study has received no financial support.

Peer-review: Externally peer-reviewed.

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